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WASTEWATER INVENTORY, POTOMAC RIVER BASIN

Norbert A. Jaworski, et al

Federal Water Pollution Control Administration
Charlottesville, Virginia

December 1968

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WASTEWATER INVENTORY

POTOMAC RIVER BASIN

U. S. DEPARTMENT OF THE INTERIOR

Federal Water Pollution Control Administration

Middle Atlantic Region

Charlottesville, Virginia

December 1968

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UNITED STATES
DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION
Annapolis Science Center
Annapolis, Maryland 21401

April 29, 1969

TO: Participants of the Potomac River Basin Wastewater Inventory:

SUBJECT: Revision Number 1 of the Wastewater Inventory Potomac River Basin

Enclosed is a copy of Chapter III which has been corrected and updated. Chapter III as originally published should be discarded as it contains some errors. Other changes to be made in "pen and ink" are also enclosed. Again, any additional comments or corrections are invited.

Norbert A. Jaworski

Norbert A. Jaworski, Ph.D
Sanitary Engineer
Chesapeake Technical Support
Laboratory
Middle Atlantic Region

Enclosures 3

PEN AND INK CHANGES

1. Page II - 2 -- Under Governmental Agencies: Add Pennsylvania State Health Department

2. Figure III - 1 -- Keyser should be designated primary treatment

3. Page IV - 2 -- * = Wastewater Discharge to a Municipal System

4. Table V - 1, Page V - 2 -- Indexes I-Biological Class for West Virginia Pulp & Paper Company should be changed to B-11

5. Table V - 1 (Cont.), Page V - 3 -- Change Westernport, Maryland under Receiving Stream to North Branch Potomac River and for same under Remarks add Upper Potomac River Commission Plant

6. Table V - 1 (Cont.), Page V - 4 -- Ridgely, West Virginia change Removal of BOD (%) to zero. Under Receiving Stream for same change to North Branch Potomac River and under Remarks no treatment

7. Table V - 4, Page V - 8 -- Williamsport, Maryland Effluent BOD should read 350

8. Table V - 5, Page V - 9 -- Doubleday & Company Index should read A-2

9. Table V - 5, Page V - 9 -- Marquette Cement Mfg. Company Index should read H-2

10. Table V - 5, Page V - 9 -- Western, Maryland R. R. Index should read E-7

11. Table V - 12, Page V - 20 -- Cumberland TWP, Pennsylvania Effluent BOD (#/day) should read 8

CHAPTER III

SUMMARY

As of December, 1968, there are 384 known wastewater discharges in the Potomac River Basin. From the detailed inventory presented in Chapter V and from the 1958 inventory published by the U. S. Public Health Service, the following information has been summarized:

1. There are about 2,900,000 people served by 264 domestic wastewater treatment facilities in the basin. Of the 2,702,000 people served, the wastes from 13,000 receive no treatment, 100,000 receive primary treatment, and 2,787,000 receive intermediate-secondary wastewater treatment. (See Figure III - 1 for major municipal wastewater discharges in the Potomac River Basin)
2. There are 67 industrial biodegradable wastewater discharged producing about 151,900 #/day of biochemical oxygen demand (BOD) of which approximately 50% is removed by wastewater treatment.
3. The wastewater BOD loading for the entire basin is presented below:

Waste Type	Before Treatment (#/day)	% of Total	After Treatment (#/day)	% of Total
Sanitary	591,100	80	158,000	68
Industrial	151,900	20	75,300	32
Total	743,000	100	233,300	100

4. In 1958, the sewered population of the basin was about 2,050,000 with a total municipal and industrial BOD loading, after treatment, of about 325,000 #/day.
5. Of the present 2,900,000 sewered population, about 86 percent is in the Washington, D. C. Metropolitan area.
6. Industry in the North Branch and Shenandoah sub-basins discharge about 61 and 31 percent, respectively, of the total BOD loadings from industrial sources. (See Figure III - 2 for major industrial wastewater discharges in the Potomac River Basin)
7. In the basin, there are 28 industrial and municipal facilities discharging a total of 2,114,000,000 gallons per day of cooling water. (See Figure III - 3 for major thermal discharges in the Potomac River Basin)
8. The nutrient wastewater loadings [phosphorus (PO_4) and total Kjeldahl nitrogen (TKN) as N] discharged into the surface water of the basin are presented below:

Waste Type	PO_4 (#/day)	% of Total	TKN (#/day)	% of Total
Sanitary	73,400	90	60,000	93
Industrial	8,000	10	5,000	7
Total	81,400	100	65,000	100

9. Of the total wastewater nutrient loading in the basin, approximately 77 percent and 83 percent of the phosphorus

and TKN, respectively, is from discharges in the Washington, D. C. area.

WASTEWATER INVENTORY

POTOMAC RIVER BASIN

December 1968

Compiled by:

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and

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Chesapeake Field Station
Middle Atlantic Region
Federal Water Pollution Control Administration
U. S. Department of the Interior

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CHAPTER I

PREFACE

The first complete inventory of water uses and wastewater loadings in the Potomac River Basin was compiled in 1958 by the U. S. Public Health Service. Since then numerous surveys, investigations, and inspections of these facilities have been conducted by various local, state, and federal agencies. These findings were consolidated in 1966, by the Chesapeake Field Station, into a waste inventory as part of the President's Water Quality Sub-Task Force Study and distributed to the several state, county, and municipal agencies involved. It has been continuously updated and revised and served as a basis for this inventory.

Since 1958, other parameters such as nutrients have become a significant factor in water quality management. The need for current waste discharge data continues. Knowledge of existing and past water use and wastewater loadings is essential in providing for water quality management in any river basin.

CHAPTER II

INTRODUCTION

A. Purpose and Scope

As part of the Chesapeake Bay-Susquehanna River Basins Project, the Chesapeake Field Station (CFS), Middle Atlantic Region, Federal Water Pollution Control Administration (FWPCA) has undertaken a comprehensive water quality management study of the Potomac River Basin. Important phases of this study are the determination of the effects of wastewater discharges on water quality in the Potomac Estuary and the recommendation of a program to achieve the approved water quality standards for this interstate river.

An essential part of the background investigation has been the compilation of a current inventory of all wastewater discharges in the Potomac River Basin. This compilation, in conjuction with past information and future projections, forms the base from which a comprehensive water quality management program can be developed.

Presented in this report is a complete inventory of all reported wastewater discharges including:

1. Population Served
2. Wastewater Index
3. Wastewater Flow (mgd)
4. Untreated BOD (#/day)
5. Treated BOD (#/day)
6. % BOD Removal
7. Phosphorus in effluent (#/day)
8. Nitrogen in effluent (#/day)
9. Receiving Stream
10. Remarks

The preceding information is presented in detail and summary form by sub-regions, eighteen in all. Maps showing major municipal, industrial-biodegradable, and thermal wastewater discharges are also presented.

B. Authority

This survey was conducted and the report prepared under the provisions of the Federal Water Pollution Control Act as amended (33 U.S.C. 466 et seq.) which directs the Secretary of the Interior to prepare or develop programs for eliminating or reducing the pollution of interstate waters and tributaries thereof and improving the sanitary condition of surface and underground waters, in cooperation with State water pollution control agencies and with the municipalities and industries involved.

C. Acknowledgments

The assistance and cooperation of various governmental and institutional agencies together with the industries in the basin enabled the Chesapeake Field Station to collect and assemble data in what would otherwise have taken a much longer period of time. While every agency and industry contacted provided valuable assistance, the cooperation of the following governmental agencies and industries who participated in the sampling program merit special recognition:

Governmental Agencies:

Maryland Department of Water Resources
Maryland State Department of Health
Interstate Commission on the Potomac River Basin
Virginia Department of Conservation and Economic Development
Virginia State Water Control Board

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West Virginia Department of Natural Resources
Washington Suburban Sanitary Commission
District of Columbia, Department of Public Health
District of Columbia, Department of Sanitary Engineering
Upper Potomac River Commission, Westernport, Maryland

Municipalities:

City of Alexandria, Virginia
City of Winchester, Virginia
City of Waynesboro, Virginia
City of Staunton, Virginia
City of Hancock, Maryland
City of Pinto, Maryland
City of Cresaptown, Maryland
City of Bowling Green, Maryland
City of Cumberland, Maryland
City of Frederick, Maryland
City of Hagerstown, Maryland
City of Williamsport, Maryland
City of Martinsburg, West Virginia
City of Romney, West Virginia
City of Petersburg, West Virginia
City of Moorefield, West Virginia
City of Keyser, West Virginia
Town of Front Royal, Virginia
Borough of Chambersburg, Pennsylvania
Borough of Gettysburg, Pennsylvania
Borough of Greencastle, Pennsylvania
Borough of Waynesboro, Pennsylvania
Borough of Mercersburg, Pennsylvania
County of Fairfax, Virginia
County of Arlington, Virginia

Industries:

Celanese Fibers Company, Narcelle, Maryland
West Virginia Pulp and Paper Company, Luke, Maryland
Byron and Sons, Williamsport, Maryland
Loewengart and Company, Mercersburg, Pennsylvania
Loewengart and Company, Petersburg, Pennsylvania
Rockingham Poultry Company, Moorefield, West Virginia
E. I. DuPont, Martinsburg, West Virginia
Minnesota Mining and Manufacturing Company, Martinsburg, West Virginia
Corning Glass Company, Martinsburg, West Virginia
Halltown Paper Company, Halltown, West Virginia
E. I. DuPont Company, Waynesboro, Virginia

Crompton-Shenandoah, Waynesboro, Virginia
Merck and Company, Elkton, Virginia
American Viscose, Front Royal, Virginia
Potomac Edison Company, Hagerstown, Maryland
Potomac Electric Power Company, Washington, D. C.

CHAPTER III

SUMMARY

As of December, 1968, there are 394 known wastewater discharges in the Potomac River Basin. From the detailed inventory presented in Chapter V and from the 1953 inventory published by the U. S. Public Health Service, the following information has been summarized:

1. There are about 2,702,000 people served by 394 domestic wastewater treatment facilities in the basin. Of the 2,702,000 people served, the wastes from 13,000 receive no treatment, 100,000 receive primary treatment, and 2,589,000 receive intermediate-secondary wastewater treatment. (See Figure III - 1 for major municipal wastewater discharges in the Potomac River Basin)
2. There are 67 industrial biodegradable wastewater discharges producing about 151,900 #/day of biochemical oxygen demand (BOD) of which approximately 50% is removed by wastewater treatment.
3. The wastewater BOD loading for the entire basin is presented below:

Waste Type	Before Treatment (#/day)	% of Total	After Treatment (#/day)	% of Total
Sanitary	591,100	80	158,000	68
Industrial	151,900	20	75,300	32
Total	743,000	100	233,300	100

4. In 1958, the sewered population of the basin was about 2,050,000 with a total municipal and industrial BOD loading, after treatment, of about 325,000 #/day.

5. Of the present 2,0[illegible],000 sewered population, about [illegible] percent is in the Washington, D. C. Metropolitan area.

6. Industry in the North Branch and Shenandoah sub-basins discharge about [illegible] and [illegible] percent, respectively, of the total BOD loadings from industrial sources. (See Figure III - 2 for major industrial wastewater discharges in the Potomac River Basin)

7. In the basin, there are 28 industrial and municipal facilities discharging a total of 2,114,000,000 gallons per day of cooling water. (See Figure III - 3 for major thermal discharges in the Potomac River Basin)

8. The nutrient wastewater loadings [phosphorus (PO_4) and total Kjeldahl nitrogen (TKN) as N] discharged into the surface water of the basin are presented below:

Waste Type	PO_4 (#/day)	% of Total	TKN (#/day)	% of Total
Sanitary	[illegible],000	[illegible]	60,000	77
Industrial	[illegible],000	[illegible]	[illegible],000	[illegible]
Total	[illegible]5,000	100	[illegible],000	100

9. Of the total wastewater nutrient loading in the basin, approximately 75 percent and [illegible]0 percent of the phosphorus

and TKN, respectively, is from discharges in the Washington, D. C. area.

FIGURE III - 1

MAJOR MUNICIPAL WASTEWATER DISCHARGES

POTOMAC RIVER BASIN

Chesapeake Field Station

FWPCA

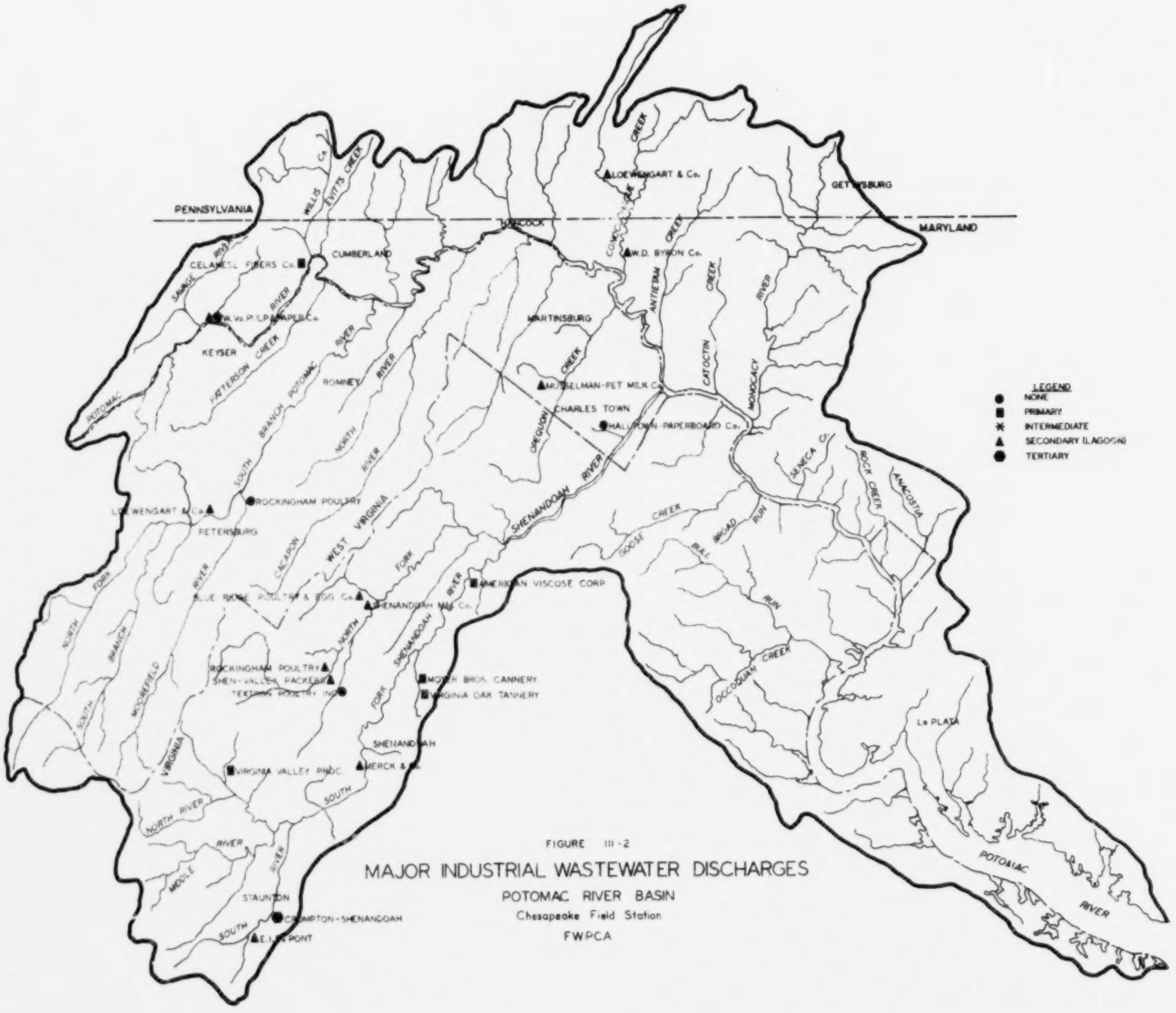

FIGURE III-2

MAJOR INDUSTRIAL WASTEWATER DISCHARGES

POTOMAC RIVER BASIN

Chesapeake Field Station

FWPCA

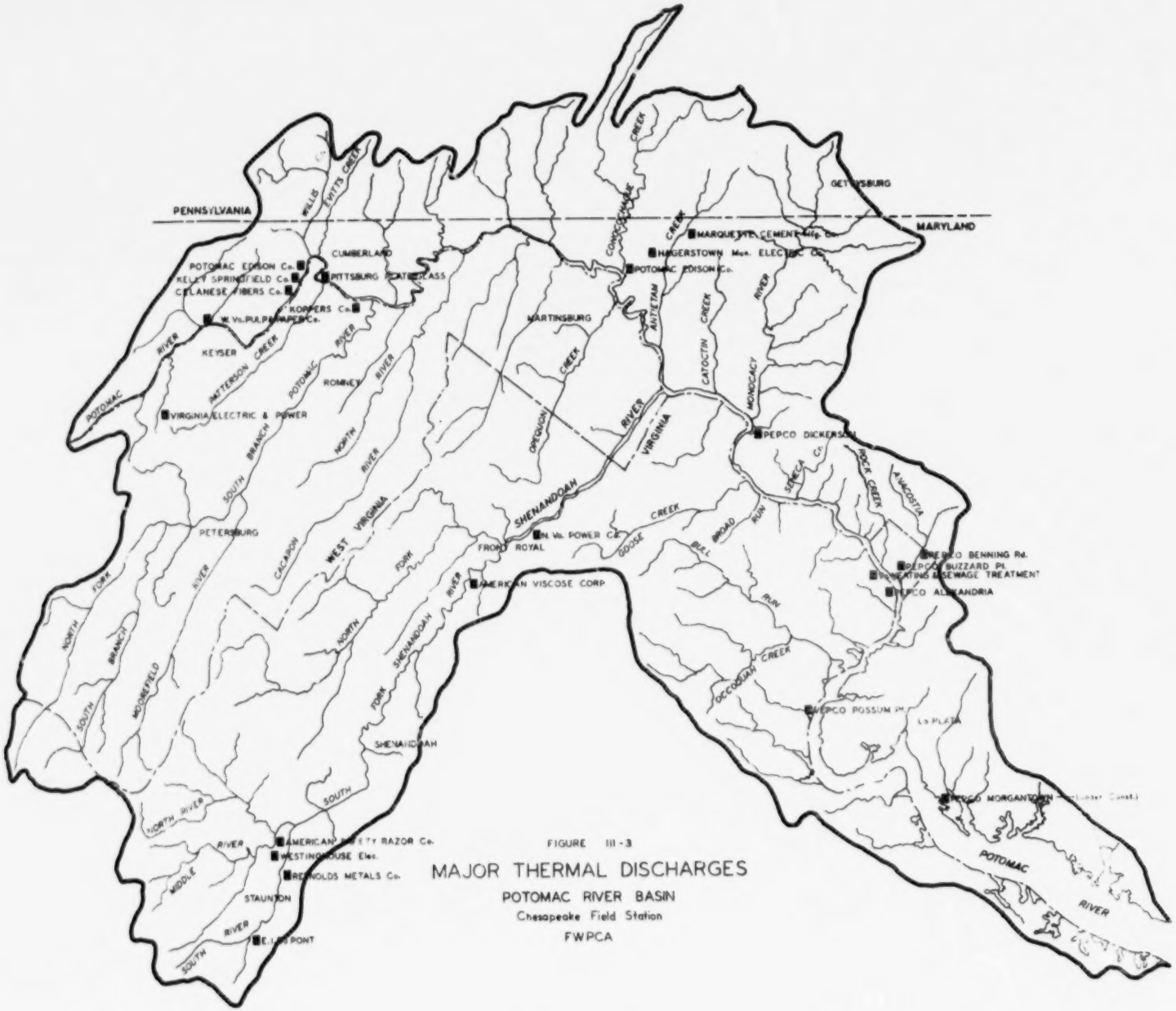

FIGURE III-3

MAJOR THERMAL DISCHARGES

POTOMAC RIVER BASIN

Chesapeake Field Station

FWPCA

CHAPTER IV

DATA SOURCES AND PRESENTATION

A. Data Sources

The information used in compiling the wastewater inventory was obtained from many sources including:

1. The 1964 cooperative industrial water use survey for the Chesapeake Bay-Susquehanna River Basins Project (Formerly by the Public Health Service of the U. S. Department of Health, Education, and Welfare and now by the Federal Water Pollution Control Administration of the U. S. Department of the Interior)
2. Wastewater treatment records and inventories as compiled by the various state agencies in Virginia, West Virginia, and Maryland.
3. Wastewater inventory prepared in 1966 by the Chesapeake Field Station as part of the President's Sub Task Force on water quality and the subsequent cooperative wastewater surveys by Chesapeake Field Station.

All municipal discharges having a wastewater flow greater than 1.0 mgd and all industries with biodegradable waste with a flow greater than 0.5 mgd were sampled during 19[illegible]. For most of these discharges, three 24-hour composites were obtained and analyzed for BOD, PO_4, and TKN.

Wastewater loadings for the remainder of the facilities were determined from either 8-hour composites, grab samples, or from assumed

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values. For the latter the following assumptions were used:

Domestic Wastewater Flow	100 gcd
Untreated BOD (Mainly Domestic)	200 mg/l
Untreated BOD (Highly Industrial)	250 mg/l
BOD Removal - Primary Plants	35%
BOD Removal - Secondary Plants	85%
Phosphorus - (PO_4 as PO_4)	30 mg/l*
Nitrogen - (TKN as N)	17 mg/l*

The flows and loadings presented in this report are considered to be average annual values for the 1968 calendar year.

B. Data Presentation

In the detailed inventory presented in Chapter V, the following abbreviations are used:

NA = Not Applicable

UNK = Unknown

ST = Septic Tanks

* = Wastewater Discharge for Municipal System

An industrial wastewater grouping which was developed by the Chesapeake Field Station was used to classify and index the discharges. (See Table IV - 1.)

*These are average concentrations as determined in a nutrient survey during 1966. A report presenting the findings of the survey is currently being prepared by the Chesapeake Field Station.

Table IV - 1

INDUSTRIAL WASTEWATER CLASSIFICATION AND INDEX

Chesapeake Field Station
Annapolis, Maryland

A. SANITARY (San.)

1. Municipal, Institutional, etc.
2. Industrial

B. INDUSTRIAL BIOLOGICAL WASTES (I-Biol.)

1. Tanneries and Leather Trades
2. Pharmaceuticals (antibiotics, biologicals; e.g., penicillin)
3. Alcohol Industries (brewing and distilling)
4. Miscellaneous Fermentation Industries
5. Glue, Size, and Gelatine Plants
6. Wool Scouring
7. Textile Manufacture (natural fibers; e.g., cotton, wool, silk, flax)
8. Floor-cloth Manufacture
9. Laundries
10. Paper
11. Pulp

C. FOOD PROCESSING WASTES (Food)

1. Canneries
2. Meat Packing, Slaughterhouse, and Related Trades
3. Poultry
4. Milk and Dairy Wastes
5. Corn Products Plants
6. Beet Sugar Factories
7. Cane Sugar Factories
8. Fish Processing Plants
9. Other Food Processing and Dehydration Plants
10. Citrus
11. Beverages (soft drinks)

D. AGRICULTURAL AND URBAN RUNOFF (Agric.)

1. Piggeries
2. Chicken Yards

E. HYDROCARBON WASTES (Hy-Car.)

1. Oil Wells
2. Petroleum Refining

3. Styrene Manufacture
4. Co-polymer Rubber Plants
5. Butadiene Plants
6. Natural Rubber Processing or Reclaiming
7. Petrol Stations, Garages, Engineering Works
8. Aircraft Maintenance

F. PHENOLIC WASTES (Pheno.)

1. Gas Plants and By-product Coke Plants
2. Tar Distillation, Road Oil, and Cresoting Plants
3. Chemical Plants
4. Synthetic Resin Plants
5. Wood Distillation
6. Dye Manufacturing

G. MISCELLANEOUS ORGANIC CHEMICAL WASTES (Organ.)

1. Munition Plants (e.g. TNT, Tetryl, Ammonium picrate, etc.)
2. Synthetic Pharmaceuticals
3. Synthetic or Man-made Textile Fibers (e.g. rayon, nylon, etc.)
4. Organic Chemical Manufacture
5. Paints and Varnishes
6. Oil and Grease Processing and Refining

H. COOLING WASTES (Cool.)

1. Cooling Water for Condensers
2. Boiler Blow-off

I. WASTES CHIEFLY MINERAL IN NATURE, WITH POSSIBLE MINOR ORGANICS (Miner.)

1. Brine Wastes
2. Mineral Washing Slurries and Suspensions (e.g. stone sawing, sand and china clay washing)
3. Mine Drainage (pit water from coal mines)
4. Pickle Liquor Wastes (e.g. iron and copper pickling, galvanizing)
5. Electro-plating
6. Water Softening
7. Inorganic Chemical Manufacturing Wastes
8. Battery Manufacture
9. Coal-washing
10. Inorganic Pigments
11. Photographic Wastes

J. RADIOACTIVE WASTES (Rad.)

(e.g. atomic energy plants and experimental stations; hospitals and industries using radioactive isotopes)

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CHAPTER V

WASTEWATER INVENTORY TABLES

Table V - 1

MUNICIPAL AND INDUSTRIAL WASTEWATER INVENTORY

North Branch Potomac River Basin

Name	Pop. Served	Wastewater Class	Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal Of BOD (%)	Effluent T. PO_4 (#/day)	Effluent TKN (#/day)	Effluent Other (#/day)	Receiving Stream	Remarks
Virginia Electric & Power (Mt. Storm, W. Va.)	NA	Cool.	H-1	720.000	NA	NA	NA	NA	NA	-	Mt. Storm Lake	
	NA	Cool.	H-2	Unk	NA	NA	NA	NA	NA	-	Stoney Creek	Acid - Low pH
Bayard, W. Va.	470	San.	A-1	0.060	100	100	0	15	8	-	Buffalo Creek	Have sewers
Alpine Coal Co. Div. of Moust Co. (Henry, W. Va.)	NA	Miner.	I-3	0.380	NA	NA	NA	NA	NA	-	Elk Run	Coal washer
	NA	Miner.	I-3	Unk	NA	NA	NA	NA	NA	-	Decken Run	Active mine
N. Branch Coal Co. Div. of Moust Co. (Bayard, W. Va.)	NA	Miner.	I-3	0.300	NA	NA	NA	NA	NA	-	L. Buffalo Creek	Coal washer
	NA	Miner.	I-3	Unk	NA	NA	NA	NA	NA	-	L. Buffalo Creek	Active mine
	NA	Miner.	I-3	Unk	NA	NA	NA	NA	NA	-	L. Buffalo Creek	Gob pile seepage
Kitzmiller, Md.	580	San.	A-1	0.070	115	0	0	0	0	-	To Septic Tanks	
Masteller Coal Co. (Hampshire, W. Va.)	NA	Miner.	I-3	Unk	NA	NA	NA	NA	NA	-	Piney Swamp Run	Coal screening
Luke, Md.	900	San.	A-1	0.110	NA	NA	NA	NA	NA	-	To UPRC Plant	
W. Va. Pulp & Paper Co. (Luke, Md.)	NA	I-Biol.	B-10	11.000	16,000	16,000	0	1,100	230	-	N. Br. Potomac R.	Plans to treat
		I-Biol.	B-10	20.000*	NA	NA	NA	NA	NA	-	To UPRC Plant	
		Cool.	H-1	45.000	NA	NA	NA	NA	NA	-	N. Br. Potomac R.	
Frostburg, Md.	5,500*	San.	A-1	0.550*	NA	NA	NA	NA	NA	-	To Cumb. STP	
Lotz Wholesale Meat Co. (Frostburg, Md.)	NA	Food	C-2	0.001	2	1	35	1	1	-	Sandspring Run	
Borden Shaft, Md.	192	San.	A-2	0.004	8	8	0	1	1	-	Georges Creek	
Midland, Md.	650	San.	A-1	0.080	130	130	0	26	15	-	Georges Creek	
Lonaconing, Md.	2,000	San.	A-1	0.240	400	400	0	78	44	-	Georges Creek	
Barton, Md.	540	San.	A-1	0.100	170	170	0	32	18	-	Georges Creek	

Table V - 1 (cont.)

North Branch Potomac River Basin (cont.)

Name	Pop. Served	Wastewater Class	Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal Of BOD (%)	T. PO4 (#/day)	Effluent TKN (#/day)	Other (#/day)	Receiving Stream	Remarks
Piedmont, W. Va.	3,000*	San.	A-1	0.180*	NA	NA	NA	NA	NA	-	To UPRC Plant	
Westernport, Md.	5,000	I-Biol.	B-10	21.000	41,000	5,300	87	700	210	-	To UPRC Plant	
Keyser, W. Va.	6,500	San.	A-1	0.620	8,500	4,100	52	125	85	-	N. Br. Potomac R.	New plant
Bel-Air - Pinto, Md.	400	San.	A-1	0.070	120	48	60	14	7	-	N. Br. Potomac R.	
Hercules Powder Co. Allegany Ballistics Lab. (Rocket Center, W. Va.)	NA	San.	A-2	0.050	83	12	85	12	6	-	N. Br. Potomac R.	
	NA	Organ.	G-1	0.000	0	0	NA	0	0	-	N. Br. Potomac R.	Not in operation
Mason Dairy Co. (Cresaptown, Md.)	NA	Food	C-4	0.040	100	100	0	10	6	-	N. Br. Potomac R.	
Cresaptown, Md.	3,500	San.	A-1	0.070	240	95	60	23	14	-	W. Br. Potomac R.	Lagoon
Celanese Fibers Co. (Amcelle, Md.)	NA	Organ.	G-4	3.000	25,000	25,000	0	1,500	125	-	N. Br. Potomac R.	Plans to treat
		Cool.	H-1	58.000	NA	NA	NA	NA	NA	-	" " "	
		Cool.	H-2	2.000	NA	NA	NA	NA	NA	-	" " "	
Potomac Edison (Amcelle, Md.)	NA	Cool.	H-1	0.600	NA	NA	NA	NA	NA	-	N. Br. Potomac R.	Makes power for Celanese Corp.
Bowling Green, Md.	2,250	San.	A-1	0.200	380	180	52	30	40	-	N. Br. Potomac R.	
Hyndman, Pa.	1,124	San.	A-1	0.100	170	170	0	32	18	-	Wills Creek	
Wellersburg, Pa.	330	San.	A-1	0.040	67	67	0	13	7	-	Wills Creek	
Martin Marietta Co. Appalachian Stone Div. (Cumberland, Md.)	NA	Miner.	I-2	0.020	0	0	0	0	0	-	Wills Creek	
Cumberland Cement & Supply Co. (Cumberland, Md.)	NA	Miner.	I-2	0.000	NA	NA	NA	NA	NA	-	Wills Creek	Closed system

Table V - 1 (cont.)

Name	Pop. Served	Wastewater Class	Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal Of BOD (%)	T. PO4 (#/day)	Effluent TKN (#/day)	Other (#/day)	Receiving Stream	Remarks
Martin Marietta Co. Manley Sand Div. (Cumberland, Md.)	NA	Miner.	I-2	0.000	NA	NA	NA	NA	NA	-	Wills Creek	Closed system
Queens City Brewing (Cumberland, Md.)	NA	I-Bi ...	B-3	0.300	500	500	0	50	50	-	Wills Creek	
LaVale, Md.	4,000*	San.	A-1	0.400*	NA	NA	NA	NA	NA	-	To Cumb. STP	
Kelly Springfield Co. (Cumberland, Md.)	NA	Cool.	H-2	4.800	NA	NA	NA	NA	NA	-	N. Br. Potomac R.	
Potomac Edison Co. (Cumberland, Md.)	NA	Cool.	H-1	45.000	NA	NA	NA	NA	NA	-	N. Br. Potomac R.	Maximum use
Ridgeley, W. Va.	1,600*	San.	A-1	0.160*	NA	NA	NA	NA	NA	-	To Cumb. STP	
Cumberland, Md.	55,000	San.	A-1	5.200	11,260	6,930	49	950	560	-	N. Br. Potomac R.	
Pittsburg Plate Glass (Cumberland, Md.)	NA	San.	A-2	0.260	430	280	35	64	37	-	N. Br. Potomac R.	
		Organ.	G-2	2.200	Unk	256	Unk	70	270	-	" " "	Lagoons
Burlington, W. Va.	360	San.	A-1	0.050	83	ST	ST	ST	ST	-	Patterson Creek	No collection system
Ft. Ashby, W. Va.	900	San.	A-1	0.120	200	ST	ST	ST	ST	-	Patterson Creek	No collection system
Patterson Creek, W. Va.	315	San.	A-1	0.040	67	ST	ST	ST	ST	-	Patterson Creek	No collection system
Koppers Co. (Green Spring, W. Va.)	NA	San.	A-2	0.002	20	3	85	1	1	-	Greenspring Run	Small ponds
		Pheno.	F-2	0.010	660	100	85	0	0	-	" "	
		Cool.	H-1	0.020	NA	NA	NA	NA	NA	-	" "	
Cumberland Charcoal Co. (Beryl, W. Va.)	NA	Miner.	I-3	Unk	Unk	Unk	Unk	Unk	Unk	-	Patterson Creek	Hauled to area by truck

Table V - 2

MUNICIPAL AND INDUSTRIAL WASTEWATER INVENTORY

South Branch and Upper Potomac River Basin

Name	Pop. Served	Wastewater Class	Wastewater Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal Of BOD (%)	Effluent T. PO_4 (#/day)	Effluent TKN (#/day)	Effluent Other (#/day)	Receiving Stream	Remarks
Monterey, Va.	300	San.	A-1	0.050	83	54	35	12	7	-	S. Br. Potomac R.	Lagoon
Franklin, W. Va.	760	San.	A-1	0.045	75	11	85	11	6	-	S. Br. Potomac R.	New plant
Circleville, W. Va.	150	San.	A-1	0.001	2	ST	ST	ST	ST	-	S. Br. Potomac R.	Septic tanks
Petersburg, W. Va.	4,200	San.	A-1	0.270	360	75	80	84	48	-	S. Br. Potomac R.	Primary
Loewengart & (Petersburg, W. Va.)	NA	I-Biol.	B-1	0.140	1,290	790	39	25	23	-	S. Br. Potomac R.	
Moorefield, W. Va.	1,500	San.	A-1	0.040	270	240	35	42	24	-	Moorefield River	Plans for secondary 50% sewer
Pierce Pre-cooked Foods (Moorefield, W. Va.)	NA	Food	C-9	0.018*	NA	NA	NA	NA	NA	-	To Moorefield STP	Grease removal
Rockingham Poultry (Moorefield, W. Va.)	NA	Food	C-3	0.150	900	670	12	20	40	-	Moorefield River	Plans to treat
Romney, W. Va.	3,000	San.	A-1	0.340	560	200	65	70	50	-	S. Br. Potomac R.	
Hampshire High School (Romney, W. Va.)	518	San.	A-1	0.002	3	1	85	5	3	-	S. Br. Potomac R.	Package plant
School for Deaf (Romeny, W. Va.)	340	San.	A-1	0.040	65	43	35	10	6	-	S. Br. Potomac R.	Septic tanks
Paw Paw, W. Va.	790	San.	A-1	0.100	170	51	70	25	14	-	Potomac River	Lagoon
Lost River State Park (Hardy County, W. Va.)	800	San.	A-1	0.020	25	4	85	5	3	-	Cacapon River	Septic tanks
Berkeley Springs, W. Va.	1,140	San.	A-1	0.170	280	280	0	55	31	-	Warm Spring Run	Under orders
Aulabaugh Bros. (Berkeley Springs, W. Va.)	NA	Food	C-1	0.018	45	45	0	5	3	-	Warm Spring Run	Seasonal
Pennsylvania Glass-Sand Co. (Berkeley Springs, W. Va.)	NA	San.	A-2	0.060	100	65	35	15	9	-	Warm Spring Run	Septic tanks
		Miner.	I-2	0.180	NA	NA	NA	NA	NA	-	" " "	Sediment problem

Table V - 2 (cont.)

South Branch and Upper Potomac River Basin (cont.)

Name	Pop. Served	Wastewater Class	Wastewater Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal Of BOD (%)	Effluent T. PO_4 (#/day)	Effluent TKN (#/day)	Effluent Other (#/day)	Receiving Stream	Remarks
Little Miss Canning Co. (Berkeley Spring, W. Va.)	NA	Food	C-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Warm Spring Run	Seasonal
H.B. Mellot (Bethel, Pa.)	NA	Miner.	I-2	0.160	NA	NA	NA	NA	NA	-	Tonoloway Creek	
Hancock, Md.	2,000	San.	A-1	0.380	630	45	92	93	54	-	Potomac River	
McConnelsburg, Pa.	1,250	San.	A-1	0.250	420	42	90	61	35	-	Licking Creek	
Jones Springs, W. Va.	135	San.	A-1	0.016	27	27	0	5	3	-	Back Creek	
Hodgesville, W. Va.	380	San.	A-1	0.047	78	78	0	15	9	-	Back Creek	
Virginia Glass Co. (Gore, Va.)	NA	Miner.	I-2	0.900	NA	NA	NA	NA	NA	-	Back Creek	

Table V - 3

MUNICIPAL AND INDUSTRIAL WASTEWATER INVENTORY

Opequon Creek

Name	Pop. Served	Wastewater Class	Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal Of BOD (%)	Effluent T. PO_4 (#/day)	Effluent TKN (#/day)	Effluent Other (#/day)	Receiving Stream	Remarks
Winchester, Va.	18,000	San.	A-1	2.400	5,700	460	91	400	860	-	Abrams Creek	Varies seasonally
O'Sullivan Rubber Co. (Winchester, Va.)	NA	San.	A-2	0.025	40	26	35	5	2	-	Abrams Creek	
		Hy-Car.	E-6	2.000	Unk	Unk	0	Unk	Unk	-	Abrams Creek	
Clearbrook Woolen Mills (Winchester, Va.)	NA	I-Biol.	B-6	0.200	Unk	Unk	Unk	Unk	Unk	-	Clearbrook Creek	
Middleway, W. Va.	685	San.	A-1	0.090	150	98	35	22	13	-	Opequon Creek	Septic tanks
Minn. Mining & Mfg. Co. (Middleway, W. Va.)	NA	San.	A-2	0.007	Unk	Unk	Unk	Unk	Unk	-	Turkey Run	
		Organ.	G-4	0.606	420	140	66	280	10	-	" "	
		Cool.	H-2	0.013	NA	NA	NA	NA	NA	-	" "	
Inwood, W. Va.	420	San.	A-1	0.050	80	80	0	16	9	-	Opequon Creek	Septic tanks
Musselman - Pet Milk Co. (Inwood, W. Va.)	NA	Food	C-9	0.300	3,750	1,500	60	74	42	-	Opequon Creek	Seasonal
Leetown, W. Va.	110	San.	A-1	0.030	45	45	0	10	5	-	Opequon Creek	Septic tanks
Kearneysville, W. Va.	550	San.	A-1	0.080	100	100	0	26	15	-	Opequon Creek	Septics tanks
Martinsburg, W. Va.	15,000	San.	A-1	1.500	3,750	950	88	250	85	-	Opequon Creek	
Corning Glass Works (Martinsburg, W. Va.)	NA	San.	A-2	0.525	75	35	64	2	1	-	Buzzard Run	
		Cool.	H-1	0.325	NA	NA	NA	NA	NA	-	" "	
Standard Lime and Stone Co. (Martinsburg, W. Va.)	NA	San.	A-2	0.020	33	21	35	5	3	-	Opequon Creek	Septic tanks
		Miner.	I-2	0.980	NA	NA	NA	NA	NA	-	Opequon Creek	Quarry drainage
Jones & Laughlin Steel Co. - Blair Limestone Div. (Martinsburg, W. Va.)	NA	San.	A-2	0.002	3	1	85	1	1	-	Opequon Creek	Septic tanks
		Miner.	I-2	0.550	NA	NA	NA	NA	NA	-	Opequon Creek	Settling ponds
E.I. DuPont de Nemours & Co. (Martinsburg, W. Va.)	NA	Organ.	G-4	0.079	15	10	33	6	35	-	Opequon Creek	
		Cool.	H-1	0.400	NA	NA	NA	NA	NA	-	Opequon Creek	High nitrates 1,000 ppm

Table V - 4

MUNICIPAL AND INDUSTRIAL WASTEWATER INVENTORY

Conococheague Creek and Upper Middle Potomac River Basin

Name	Pop. Served	Wastewater Class	Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal Of BOD (%)	Effluent T. PO_4 (#/day)	Effluent TKN (#/day)	Effluent Other (#/day)	Receiving Stream	Remarks
Chambersburg, Pa.	17,000	San.	A-1	1.826	8,730	730	91	560	245	-	Conococheague Creek	
H.J. Heinz Co. (Chambersburg, Pa.)	NA	Food	C-1	0.430	2,900	290	99	106	61	-	Conococheague Creek	
Scotland Orphanage, Pa.	850	San.	A-1	0.100	232	35	85	25	14	-	Conococheague Creek	
Dixon TB Hospital, Pa.	1,700	San.	A-1	0.300	480	72	85	74	42	-	Conococheague Creek	
Letterkenny Ord. Depot	NA	Hy-Car.	E-7	0.050	160	8	95	12	7	-	Conococheague Creek	
		San.	A-1	0.024	70	7	90	6	3	-	Conococheague Creek	
Loewengart & Co. (Mercersburg, Pa.)	NA	I-Biol.	B-1	0.180	915	590	35	5	55	-	West Branch	
Metal Twp. (Penna.)	NA	San.	A-1	0.010	160	24	85	2	1	-	West Branch	
Mercersburg, Pa.	2,300	San.	A-1	0.220	400	60	85	54	31	-	West Branch	
Greencastle, Pa.	3,000	San.	A-1	0.130	425	50	89	45	26	-	Conococheague Creek	Overloaded
Acme Markets (Antrim, Pa.)	NA	Food	C-2	0.070	700	35	95	17	10	-	Conococheague Creek	
Kemp Mill, Md.	100	San.	A-1	0.003	50	30	0	10	5	-	Conococheague Creek	
W.D. Byron Co. (Williamsport, Md.)	NA	I-Biol.	B-1	0.370	3,000	1,290	64	10	155	-	Conococheague Creek	
Williamsport, Md.	1,900	San.	A-1	0.233	485	930	13	124	54	-	Potomac River	
Potomac Edison Co. (Williamsport, Md.)	NA	Miner.	I-2	0.405	NA	NA	NA	NA	NA	-	Potomac River	
		Cool.	H-1	234.000	NA	NA	NA	NA	NA	-	Potomac River	234.0 mgd maximum

Table V - 5

MUNICIPAL AND INDUSTRIAL WASTEWATER INVENTORY

Antietam and Middle Potomac River Basin

Name	Pop. Served	Wastewater Class	Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal Of BOD (%)	Effluent T. PO4 (#/day)	TKN (#/day)	Other (#/day)	Receiving Stream	Remarks
Shepherdstown, W. Va.	1,300	San.	A-1	0.140	233	233	0	45	26	-	Potomac River	
Meere Sand & Gravel (Shepherdstown, W. Va.)	NA	Miner.	I-2	0.290	NA	NA	NA	NA	NA	-	Potomac River	
Fayettville, Pa.	2,700	San.	A-1	0.060	100	0	100	0	0	-	To Land	
Mont Alto, Pa.	900	San.	A-1	0.063	105	0	100	0	0	-	To Land	
Waynesboro, Pa.	11,000	San.	A-1	1.968	2,100	285	86	275	145	-	Antietam Creek	
E.U.B. Orphanage, Pa.	350	San.	A-1	0.020	33	5	85	5	3	-	Antietam Creek	
Ft. Ritchie, Md.	1,500	San.	A-1	0.140	233	2	99	34	17	-	Rod Run	
Smithsburg, Md.	680	San.	A-1	0.090	210	5	99	20	13	-	Beaver Creek	
Doubleday & Co. (Smithsburg, Md.)	NA	San.	A-1	0.003	5	1	85	1	1	-	Beaver Creek	
		Miner.	I-6	0.035	NA	NA	NA	NA	NA	-	Beaver Creek	Plating - batch treatment
Marquette Cement Mfg. Co. (Hagerstown, Md.)	NA	Cool.	H-2	8.100	NA	NA	NA	NA	NA	-	Antietam Creek	
Hagerstown, Md.	36,000	San.	A-1	5.582	15,250	6,900	55	1,800	570	-	Antietam Creek	
Western Md. R.R. (Hagerstown, Md.)	NA	Hy-Car.	C-8	0.133	NA	NA	NA	NA	NA	-	Antietam Creek	Oil
Hagerstown Mun. Electric Co. (Hagerstown, Md.)	NA	Cool.	H-1	33.400	NA	NA	NA	NA	NA	-	Antietam Creek	Cooling towers
Fairchild Hiller Corp. (Hagerstown, Md.)	NA	San.	A-2	0.180	300	45	85	44	25	-	Antietam Creek	
		Miner.	I-5	0.470	NA	NA	NA	NA	NA	-	" "	Plating - batch treatment
Funkstown, Md.	970	San.	A-1	0.080	133	20	85	20	11	-	Antietam Creek	
Halfway, Md.	2,500	San.	A-1	0.250	362	260	29	61	35	-	Potomac River	Halfway Sanitary Dist.

Table V - 5 (cont.)

Antietam and Middle Potomac River Basin (cont.)

Name	Pop. Served	Wastewater Class	Wastewater Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal of BOD (%)	Effluent T. PO_4 (#/day)	Effluent TKN (#/day)	Effluent Other (#/day)	Receiving Stream	Remarks
Md. State Reformatory (Breadthsville, Md.)	1,250	San.	A-1	0.060	100	15	85	15	9	-	Antietam Creek	
Boonsboro, Md.	1,200	San.	A-1	0.060	100	15	85	15	9	-	Beaver Creek	
Keedysville, Md.	320	San.	A-1	0.050	83	83	0	16	9	-	Antietam Creek	
Sharpsburg, Md.	780	San.	A-1	0.100	167	109	35	25	14	-	Potomac River	

Table V - 6

MUNICIPAL AND INDUSTRIAL WASTEWATER INVENTORY

North Fork Shenandoah River Basin

Name	Pop. Served	Wastewater Class	Wastewater Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal Of BOD (%)	Effluent T. PO_4 (#/day)	Effluent TKN (#/day)	Effluent Other (#/day)	Receiving Stream	Remarks
Pulks Run E.S. (Rockingham Co.) (Harrisonburg, Va.)	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	N. Fork Shen.	School
Valley Trailer Park & Sales (Harrisonburg, Va.)	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Linville Creek	
Triangle "E" By-Products Co., Inc. (Linville, Va.)	NA	Food	C-9	0.070	270	0	100	0	0	-	Linville Creek	Lagoon
Broadway, Va.	640	San.	A-1	0.130	217	33	85	32	18	-	Linville Creek	Lagoon
Nat. Fruit Prod. Corp. (Timberville, Va.)	NA	Food	C-9	0.010	250	0	100	0	0	-	Spray, Irrigation	Seasonal
Rockingham Poultry Corp. (Timberville, Va.)	NA	Food	C-3	0.500	9,500	630	85	123	71	-	N. Fork Shen.	
Shen. Valley Packers (Timberville, Va.)	NA	Food	C-3	0.200	4,300	290	85	49	28	-	N. Fork Shen.	
Timberville, Va.	412	San.	A-1	0.015	25	3	90	4	2	-	N. Fork Shen.	New plant
Valley Housing Corp. Va. (Timberville, Va.)	NA	Food	C-2	0.004	NA	NA	NA	NA	NA	-	To Timberville	
Baker Dairy (Timberville, Va.)	NA	Food	C-9	Unk	Unk	Unk	Unk	Unk	Unk	-	N. Fork Shen.	
Convict Camp #3 (Rockingham Co.) (Harrisonburg, Va.)	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Tr. N. Fork Shen.	
New Market, Va.	85	San.	A-1	0.350	885	354	60	86	50	-	N. Fork Shen.	
Caroline Foods Textron Poultry Inc. (New Market, Va.)	NA	Food	C-3	0.170	Unk	Unk	Unk	Unk	Unk	-	Smiths Creek	Expanding system

Table V - 6 (cont.)

MUNICIPAL AND INDUSTRIAL WASTEWATER INVENTORY

North Fork Shenandoah River Basin (cont.)

Name	Pop. Served	Wastewater Class	Wastewater Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal Of BOD (%)	Effluent T. PO_4 (#/day)	Effluent TKN (#/day)	Effluent Other (#/day)	Receiving Stream	Remarks
Stonewall Jackson H.S. (Shenandoah Co., Va.)	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	N. Fork Shen.	School
Mt. Jackson, Va.	722	San.	A-1	0.110	183	128	30	27	16	-	N. Fork Shen.	New plant
Bowman Apple Products Co., Inc. (Mt. Jackson, Va.)	NA	Food	C-1	Unk	Unk	Unk	Unk	Unk	Unk	-	N. Fork Shen.	
Interstate #1 Rest Area (Rockingham Co., Va.)	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Smiths Creek	
Edinburg, Va.	517	San.	A-1	0.080	133	93	30	20	11	-	Stoney Creek	
Blue Ridge Poultry & Egg Co. (Edinburg, Va.)	NA	Food	C-3	0.070	7,500	750	90	17	10	-	Tr. Stoney Creek	Under Board order
Shenandoah Mg. Inc. (Edinburg, Va.)	NA	I-Biol.	B-7	0.300	1,150	170	85	74	42	-	N. Fork Shen.	
Woodstock, Va.	2,083	San.	A-1	0.350	570	88	85	86	50	-	N. Fork Shen.	
Bowman Apple Products Co., Inc. (Maurertown, Va.)	NA	Food	C-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Tr. N. Fork Shen.	
Strasburg, Va.	2,428	San.	A-1	0.300	500	100	80	74	42	-	N. Fork Shen.	
Chemstone Corp. (Strasburg, Va.)	NA	Miner.	I-2	Unk	Unk	Unk	Unk	Unk	Unk	-	Cedar Creek	
Stone Shop Diner (Strasburg, Va.)	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Cedar Creek	

Table V - 7

MUNICIPAL AND INDUSTRIAL WASTEWATER INVENTORY

North River at the South Fork Shenandoah River Basin

Name	Pop. Served	Wastewater Class	Wastewater Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal Of BOD (%)	Effluent T. PO_4 (#/day)	Effluent TKN (#/day)	Effluent Other (#/day)	Receiving Stream	Remarks
Mount Clinton E. S. (Hinton, Va.)	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Muddy Creek	
Va. Valley Processes, Inc. (Hinton, Va.)	NA	Food	C-2	0.100	3,300	1,000	30	25	14	-	Muddy Creek	
		San.	A-2	0.001	2	2	0	1	1	-	" "	
Turner-Ashby H.S. (Dayton, Va.)	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Cooks Creek	
Bridgewater, Va.	1,815	San.	A-1	0.260	433	260	30	64	37	-	No. R. S. Fork	New Plant
Dayton, Va.	930	San.	A-1	0.160	267	21	92	39	23	-	Grassy Run	
Neff Trailer Sales (Harrisonburg, Va.)	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Blacks Run	
Package Corp. of Amer. (Harrisonburg, Va.)	NA	I-Biol.	B-10	0.020	20	2	90	0	0	-	Blacks Run	
Harrisonburg, Va.	17,500	San.	A-1	2.250	4,900	1,110	75	650	420	-	Blacks Run	
Belle Meade Motel (Harrisonburg, Va.)	NA	San.	A-1	0.010	17	4	80	3	1	-	Blacks Run	Lagoon
Holiday Inn (Harrisonburg, Va.)	NA	San.	A-1	0.010	17	3	85	3	1	-	Blacks Run	Lagoon
Pleasant Valley E.S. (Harrisonburg, Va.)	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Blacks Run	
Weyers Cave Sanitary District (August Co., Va.)	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	No. R. S. Fork	

Table V - 8

MUNICIPAL AND INDUSTRIAL WASTEWATER INVENTORY

Middle River of South Fork Shenandoah River Basin

Name	Pop. Served	Wastewater Class	Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal Of BOD (%)	Effluent T. PO_4 (#/day)	TKN (#/day)	Other (#/day)	Receiving Stream	Remarks
Buffalo Gap H.S. (Augusta Co., Va.)	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Tr. Back Creek	
Verona San. Dist. (Verona, Va.)	NA	San.	A-1	0.130	217	33	85	32	18	-	Middle River	
Ingleside Hotel & Motel (Staunton, Va.)	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Tr. Middle River	
Westinghouse Electric (Verona, Va.)	NA	Cool.	H-1	0.600*	NA	NA	NA	NA	NA	-	City Sewers	
Amer. Safety Razor Co. (Verona, Va.)	NA	Cool.	H-1	0.350	NA	NA	NA	NA	NA	-	Middle River	Will treat metals
		Miner.	I-4	0.160	NA	NA	None	NA	NA	-	" "	
Staunton, Va.	25,000	San.	A-1	1.500	2,030	410	80	300	160	-	Lewis Creek	
Augusta Dairies Staunton, Va.)	NA	San.	A-1	0.040*	NA	NA	NA	NA	NA	-	City Sewers	
	NA	Cool.	H-1	0.070	NA	NA	NA	NA	NA	-	Christians Creek	
Riverheads H.S. (August Co., Va.)	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Tr. Christians Creek	
Staunton Plaza Shopping Center (Staunton, Va.	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Tr. Christians Creek	
De Jarnette Sanitar. (Staunton, Va.)	NA	San.	A-1	0.030	50	8	85	7	4	-	Christians Creek	
Woodrow Wilson Educational Center (Staunton, Va.)	NA	San.	A-1	0.040	66	10	85	10	6	-	Christians Creek	
Western St. Hospital (Staunton, Va.)	1,500	San.	A-1	0.250	450	70	85	61	35	-	Christians Creek	

Table V - 8

MUNICIPAL AND INDUSTRIAL WASTEWATER INVENTORY

Middle River of South Fork Sherandoah River Basin (cont.)

Name	Pop. Served	Wastewater		Flow	Infl't. BOD	Eff't. BOD	Removal Of BOD	Effluent $T. PO_4$	Effluent TKN	Effluent Other	Receiving Stream	Remarks
		Class	Index	(mgd)	(#/day)	(#/day)	(%)	(#/day)	(#/day)	(#/day)		
Grottoes Sand & Gravel (Grottoes, Va.)	NA	Miner.	I-2	-	NA	NA	NA	NA	NA	-	Middle River	Lagoon
Mt. Sidney, Va.	300	San.	A-1	0.012	20	3	85	3	2	-	Middle River	

Table V - 9

MUNICIPAL AND INDUSTRIAL WASTEWATER INVENTORY

South River of South Fork Shenandoah River Basin

Name	Pop. Served	Wastewater Class	Wastewater Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal Of BOD (%)	Effluent T. PO_4 (#/day)	Effluent TKN (#/day)	Effluent Other (#/day)	Receiving Stream	Remarks
Convict Road Camp #10 (Augusta Co., Va.)	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	South River	
Greenville State Welfare	NA	San.	A-1	0.020	33	5	85	5	3	-	South River	
Stuarts Draft, Va.	Unk	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	South River	
Crompton Shenandoah Co. (Waynesboro, Va.)	NA	Organ.	G-4	0.892	1,870	920	51	230	80	-	South River	
E.I. DuPont DeNemours & Co., Inc. (Waynesboro, Va.)	NA	Organ.	G-4	11.000	7,200	1,800	75	200	750	-	South River	
		Cool.	H-1	15.900	NA	NA	NA	NA	NA	-	" "	
Waynesboro, Va.	20,000	San.	A-1	2.300	1,855	645	63	435	185	-	South River	Will expand
Skyland Swannarca Corp.	NA	San.	A-2	0.021	35	5	85	5	3	-	South River	
Grottoes, Va.	969	San.	A-1	0.090	150	150	0	29	16	-	South River	Treatment proposed
Reynolds Metals Co. (Grottoes, Va.)	NA	San.	A-2	0.004	7	1	85	1	1	-	South River	
		Cool.	H-1	2.200	NA	NA	NA	NA	NA	-	" "	
General Electric Co. (Waynesboro, Va.)	NA	San.	A-2	0.100*	NA	NA	NA	NA	NA	-	City Sewers	
		Cool.	H-2	0.170	NA	NA	NA	NA	NA	-	South River	

Table V - 10

MUNICIPAL AND INDUSTRIAL WASTEWATER INVENTORY

Main Stem South Fork Shenandoah River Basin

Name	Pop. Served	Wastewater Class	Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal Of BOD (%)	Effluent $T. PO_4$ (#/day)	TKN (#/day)	Other (#/day)	Receiving Stream	Remarks
Massanette Springs, Va.	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Tr. S. F. Shen.	
Montevedeo H. S. (Augusta Co., Va.)	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Tr. S. F. Shen.	
Merck & Co., Inc. (Elkton, Va.)	NA	I-Biol.	B-2	7.700	10,500	3,500	66	2,890	1,860	-	S. F. Shen (Land in Summer)	Seasonal discharge
Elkton, Va.	1,506	San.	A-1	0.250	360	250	30	61	35	-	S. F. Shen.	
Shenandoah, Va.	1,837	San.	A-1	0.060	100	70	30	15	8	-	S. F. Shen.	
Page Co. H. S. (Virginia)	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	S. F. Shen.	
Rockingham Poultry (Alma, Va.)	NA	Food	C-3	0.070	420	300	30	17	10	-	S. F. Shen.	
Stanley, Va.	400	San.	A-1	0.050	80	80	0	16	9	-	Stoney Run	Septic tanks
Luray Motel (Luray, Va.)	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Tr. S. F. Shen.	
Moyer Bros. (Luray, Va.)	NA	San.	A-2	0.100	2,500	1,700	30	25	14	-	E. Hawksbill Creek	
Va. Oak Tannery Co. (Luray, Va.)	NA	I-Biol.	B-1	0.430	850	500	40	106	61	-	Hawksbill Creek	
I.N. Dovel Co., Inc. (Luray, Va.)	NA	San.	A-2	Unk	Unk	Unk	Unk	Unk	Unk	-	Hawksbill Creek	
Luray, Va.	3,400	San.	A-1	0.280	600	422	30	69	40	-	Hawksbill Creek	
Viscose City (Front Royal, Va.)	400	San.	A-1	0.050	83	21	75	12	7	-	S. F. Shen.	
Amer. Viscose Corp. (Front Royal, Va.)	NA	Organ.	G-3	8.640	13,400	9,350	30	80	400	-	S. F. Shen.	Dis. metals
		Cool.	H-1	0.720	NA	NA	NA	NA	NA	-	" " "	
		San.	A-2	Unk	Unk	Unk	Unk	Unk	Unk	-	Tr. S. F. Shen.	

Table V - 10 (cont.)

MUNICIPAL AND INDUSTRIAL WASTEWATER INVENTORY

Main Stem South Fork Shenandoah River Basin (cont.)

Name	Pop. Served	Wastewater Class	Wastewater Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal Of BOD (%)	Effluent T. PO_4 (#/day)	Effluent TKN (#/day)	Effluent Other (#/day)	Receiving Stream	Remarks
Old Va. Packing, Inc. (Front Royal, Va.)	NA	Food	C-9	0.018	600	600	0	4	3	-	S. F. Shen.	
		Cool.	H-1	0.120	NA	NA	NA	NA	NA	-	S. F. Shen.	
Allied Chem. Corp. (Front Royal, Va.)	NA	Organ.	C-4	0.190	NA	NA	NA	NA	NA	-	S. F. Shen.	Low pH
Beef Cattle Research (Front Royal, Va.)	NA	Agric.	D-3	0.010	4	1	75	3	2	-	Happy Creek	
Front Royal, Va.	7,950	San.	A-1	1.200	1,700	1,000	40	250	170	-	Happy Creek	

Table V - 11

MUNICIPAL AND INDUSTRIAL WASTEWATER INVENTORY

Main Stem Shenandoah

Name	Pop. Served	Wastewater Class	Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal Of BOD (%)	Effluent $T. PO_4$ (#/day)	Effluent TKN (#/day)	Effluent Other (#/day)	Receiving Stream	Remarks
Northern Va. Power Co. (Cedarville, Va.)	NA	Cool.	H-1	10.600	NA	NA	NA	NA	NA	-	Shen. River	
Stephen's City E. S. (Stephen's City, Va.)	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Stephen's River	
Stephen's City, Va.	876	San.	A-1	0.050	83	12	85	12	7	-	Stephen's River	
Berryville, Va.	1,645	San.	A-1	0.250	417	104	75	61	35	-	Dog Run Creek	
H.F. Byrd, Inc. (Berryville, Va.)	NA	Food	C-1	0.060*	NA	NA	NA	NA	NA	-	City Sewers	
Charles Town, W. Va.	3,329	San.	A-1	0.380	633	443	30	93	54	-	Evitt Run	
Ransom Fruit Co. (Ransom, W. Va.)	NA	Food Cool.	C-1 H-1	0.040 0.380	Unk	0	NA NA	0	0	- -	Spray Irrigation Evitt Run	
Halltown Paperboard Co. (Halltown, W. Va.)	NA	I-Biol.	B-10	1.000	4,200	4,200	0	20	65	-	Flowing Springs	
U.S. Steel Corp. (Halltown, W. Va.)	NA	Miner. Miner.	I-2 I-2	720.000 500.000	NA NA	NA NA	NA NA	NA NA	NA NA	- -	Shen. River " "	Quarry drainage
Jones & Laughlin Steel Co. (Millville, W. Va.)	NA	Miner.	I-2	0.600	NA	NA	NA	NA	NA	-	To Quarry	
Bolivar, W. Va.	754	San.	A-1	0.030	50	35	30	7	4	-	Shen. River	
Harper's Ferry, W. Va.	572	San.	A-1	0.030	50	50	0	10	6	-	Shen. River	
B & O Railroad (Harper's Ferry, W. Va.)	250	Hy-Car.	E-7	0.030	40	40	0	8	4	-	Shen. River	

Table V - 12

MUNICIPAL AND INDUSTRIAL WASTEWATER INVENTORY

Catoctin Creek, Md., Catoctin Creek, Va., Monocacy River (Pa.)

Name	Pop. Served	Wastewater Class	Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal of BOD (%)	Effluent T. PO_4 (#/day)	Effluent TKN (#/day)	Effluent Other (#/day)	Receiving Stream	Remarks
Myersville, Md.	417	San.	A-1	0.030	100	75	25	17	10	-	Catoctin Cr. (Md.)	
Middletown, Md.	1,156	San.	A-1	0.110	160	115	35	65	22	-	Catoctin Cr. (Md.)	
J. Lunne Cornwell Pkg. Co. (Purcellville, Va.)	NA	Food.	C-2	0.110	220	44	80	27	16	-	Catoctin Cr. (Va.)	
Lovettsville, Va.	300	San.	A-1	0.040	67	67	0	10	6	-	Catoctin Cr. (Va.)	
Brunswick, Md.	3,555	San.	A-1	0.400	667	434	35	98	57	-	Potomac River	
Gettysburg, Pa.	10,000	San.	A-1	0.900	1,140	376	67	90	120	-	Rock Creek	
Cumberland TWP, Pa.	600	San.	A-1	0.040	50	75	85	2	1	-	Rock Creek	
Gettysburg Shoe Co. (Cumberland TWP, Pa.)	NA	San.	A-1	0.006	7	1	90	2	1	-	Marsh Creek	
Gettysburg Shoe Co. (Franklin TWP, Pa.)	NA	San.	A-2	0.004	5	1	95	1	1	-	Marsh Creek	
Krouse Foods (Ortana, Pa.)	NA	Food.	C-1	0.040	670	21	97	10	6	-	Tr. Little Marsh Cr.	
Funkhouser Co. (Hamilton TWP, Pa.)	NA	Food	C-1	0.100	Unk	0	100	0	0	-	Closed System	
Littlestown, Pa.	2,850	San.	A-1	0.260	544	131	76	50	63	-	Alloway Creek	
Fairfield, Pa.	519	San.	A-1	0.020	33	5	85	5	3	-	Spring Run	New plant
Ft. Ritchie (Liberty TWP, Pa.)	1,100	San.	A-1	0.100	190	29	85	25	14	-	Miney Creek	
B.H. Shriver (German TWP, Pa.)	NA	Food.	C-1	0.004	70	7	90	1	1	-	Tr. Piney	

Table V - 13

MUNICIPAL AND INDUSTRIAL WASTEWATER INVENTORY

Monocacy River (Md.)

Name	Pop. Served	Wastewater Class	Wastewater Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal of BOD (%)	Effluent $T. PO_4$ (#/day)	Effluent TKN (#/day)	Effluent Other (#/day)	Receiving Stream	Remarks
Victor Cullen St. Hospital (Sabisville, Md.)	600	San.	A-1	0.080	55	8	85	20	11	-	N. F. Friends Cr.	
Emmitsburg, Md.	1,411	San.	A-1	0.210	220	55	75	16	23	-	Fleet Run	
St. Mary's College (Emmitsburg, Md.)	600	San.	A-1	0.080	145	22	85	7	13	-	Tr. Toms Creek	
Taneytown, Md.	1,587	San.	A-1	0.190	350	120	65	31	25	-	(Spray Irrigation) Piney Creek	Seasonal
Cambridge Rubber (Taneytown, Md.)	NA	Cool.	H-1	0.020	NA	NA	NA	NA	NA	-	Piney Creek	
Westminster, Md.	6,308	San.	A-1	0.800	2,670	410	84	240	153	-	Little Pipe Creek	
Mount Pleasant Canning (Westminster, Md.)	NA	Food	C-1	0.030	Unk	0	100	0	0	-	Spray Irrigation	Seasonal
Willow Farms (Westminster, Md.)	NA	Food	C-4	0.120	Unk	0	100	0	0	-	Spray Irrigation	
Shriver B.F. Co. (Westminster, Md.)	NA	Food	C-1	0.200	Unk	0	100	0	0	-	Spray Irrigation	Seasonal
New Windsor, Md.	788	San.	A-1	0.050	166	16	90	16	8	-	Dickerson Run	Lagoon
Union Bridge, Md.	800	San.	A-1	0.100	690	28	96	17	17	-	Little Pipe Creek	Lagoon
Thurmont, Md.	2,800	San.	A-1	0.070	117	18	85	17	10	-	Hunting Creek	New plant
Baltimore Brick Co. (Rocky Ridge, Md.)	NA	San.	A-2	0.003	5	1	85	1	0	-	Tr. Owens Creek	
Thurmont Rend. Co. (Thurmont, Md.)	NA	Food	C-2	0.010	Unk	Unk	Unk	Unk	Unk	-	L. Hunting Creek	
J. Austin Fraley (Thurmont, Md.)	NA	Food	C-2	0.010	Unk	Unk.	Unk	Unk	Unk	-	L. Hunting Creek	
A.W. Feezer (Silver Run, Md.)	NA	Food	C-2	0.030	Unk	0	100	0	0	-	Spray Irrigation	

Table V - 13(cont.)

Monocacy River (Md.) (cont.)

Name	Pop. Served	Wastewater Class	Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal of BOD (%)	Effluent T. PO_4 (#/day)	Effluent TKN (#/day)	Effluent Other (#/day)	Receiving Stream	Remarks
Woodsboro, Md.	469	San.	A-1	0.050	75	75	0	16	9	-	Israel Creek	No sewers
Castle Cheese Co. (Six Bridge, Md.)	NA	Food	C-4	0.001	Unk	0	100	0	0	-	Spray Irrigation	
Walkersville, Md.	1,172	San.	A-1	0.090	115	115	0	29	16	-	Glade Creek	No sewers
New Market, Md.	360	San.	A-1	0.030	110	2	99	5	8	-	Davis Br. (Patapsco Basin)	
Camp Detrick (Frederick, Md.)	500	San.	A-1	0.800	340	7	98	60	27	-	Monocacy River	
Frederick, Md.	30,000	San.	A-1	4.880	21,500	9,660	55	1,035	840	-	Monocacy River	
Pine Cliff (Frederick, Md.)	NA	San.	A-1	0.010	17	2	85	2	1	-	Monocacy River	
Eveready Co. (Frederick, Md.)	NA	Miner.	I-5	0.600	5	5	0	25	1	-	Carroll Creek	Neutr. wastes
Corning Fibre Box (Frederick, Md.)	NA	I-Biol.	B-10	0.400	1	1	0	1	1	-	Carroll Creek	
Ideal Dairy Farms (Frederick, Md.)	NA	Food	C-4	0.050	Unk	25	Unk	4	1	-	Monocacy River	
M.J. Grove Lime (Frederick, Md.)	NA	Miner.	I-2	1.100	NA	NA	NA	NA	NA	-	Tr. Carroll Creek	
Alpha Portland Cement (Frederick, Md.)	NA	Miner.	I-2	0.300	NA	NA	NA	NA	NA	-	To Quarry	
Peter Pan Inn (Urbana, Md.)	NA	San.	A-1	0.010	17	3	85	2	1	-	Tr. Benhetter	

Table V - 14

MUNICIPAL AND INDUSTRIAL WASTEWATER INVENTORY

Lower Portion of Upper Potomac River Basin

Name	Pop. Served	Wastewater Class	Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal of BOD (%)	Effluent T. PO_4 (#/day)	Effluent TKN (#/day)	Effluent Other (#/day)	Receiving Stream	Remarks
Purcellville, Va.	1,500	San.	A-1	0.150	400	60	85	37	21	-	Trib. Goose Cr.	
Middleburg - West, Va.	1,000	San.	A-1	0.100	167	25	85	25	14	-	Goose Creek	
- East, Va.		San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Wanopic Creek	
Leesburg, Va.	2,870	San.	A-1	0.280	466	70	85	70	40	-	Tuscarora Creek	Being expanded
Hazleton Labs (Falls Church, Va.)	NA	I-Biol.	B-2	Unk	Unk	Unk	Unk	Unk	Unk	-	Goose Creek	Lagoon
Goose Creek Country Clubs	NA	San.	A-1	0.008	13	2	85	1	1	-	Goose Creek	
Develcpment Eng. Corp.	NA	San.	A-2	Unk	Unk	Unk	Unk	Unk	Unk	-	Cattail Branch	
Foxcroft School (Loundin County, Va.)	NA	San.	A-1	0.005	4	1	85	1	1	-	Goose Creek	
Weinschel Engr. Co. (Gaithersburg, Md.)	NA	Miner.	I-5	0.001	NA	NA	NA	NA	NA	-	Seneca Creek	Neutr.
Hadley Farms Dairy (Gaithersburg, Md.)	NA	Food	C-4	0.015	Unk	Unk	Unk	Unk	Unk	-	Sececa Creek	
Herndon, Va.	1,960	San.	A-1	0.160	267	40	85	39	23	-	Folly Lick Run	Going to D. C.
Maloney Concrete Co. (Rockville, Md.)	NA	Miner.	I-2	0.010	NA	NA	NA	NA	NA	-	Little Falls Br.	
Washington Petroleum (Bethesda, Md.)	NA	Hy-Car.	E-7	1.800	NA	NA	NA	NA	NA	-	Little Falls Br.	Oil drums
Delecartia Water Treat. Plant	NA	Miner.	I-2	2.000	NA	NA	NA	NA	NA	-	Potomac Estuary	
H & D Metro Ford Tractor Co. (Rockville, Md.)	NA	Hy-Car.	E-7	Unk	NA	NA	NA	NA	NA	-	Tr. Rock Creek	
Comtee Sand & Gravel Co. (Chevy Chase, Md.)	NA	Miner.	I-2	0.010	NA	NA	NA	NA	NA	-	Broad Branch	
Pepco Dickerson Gen. Sta.	NA	Cool.	H-1	355.000	NA	NA	NA	NA	NA	-	Potomac River	

Table V - 15

MUNICIPAL AND INDUSTRIAL WASTEWATER INVENTORY

Upper Estuary of Potomac River Basin

Name	Pop. Served	Wastewater Class	Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal of BOD (%)	Effluent T. PO_4 (#/day)	Effluent TKN (#/day)	Effluent Other (#/day)	Receiving Stream	Remarks
D.C. West Heating Plant	NA	Cool.	H-1	0.370	NA	NA	NA	NA	NA	-	Potomac Estuary	
		Cool.	H-2	0.070	NA	NA	NA	NA	NA	-	" "	
Va. Heating & Sewage Treatment (Pentagon, Va.)	42,000	San.	A-2	1.100	2,300	330	85	270	155	-	Potomac Estuary	Lagoon
		Cool.	H-1	43.000	NA	NA	NA	NA	NA	-	" "	
Mineral Pigments Corp. (Muirkirk, Md.)	NA	Miner.	I-10	0.200	NA	NA	NA	NA	NA	-	Indian Creek	Chrome
Muirkirk, Md.	8,000	San.	A-1	0.800	NA	NA	NA	NA	NA	-	Indian Creek	Going to WSSC
A.H. Smith Sand & Gravel Co. (Branchville, Md.)	NA	Miner.	I-2	1.400	NA	NA	NA	NA	NA	-	Indian Creek	
Smoot Sand & Gravel Co. (Maryland)	NA	Miner.	I-2	0.240	NA	NA	NA	NA	NA	-	Indian Creek	
U.S. Naval Ord. Lab. (Whitecak, Md.)	NA	San.	A-2	0.110	183	18	90			-	Paint Branch	
		Cool.	H-1	0.160	NA	NA	NA	NA	NA	-	" "	
Wm. H. McCeney Co. (Whitecak, Md.)	NA	Miner.	I-2	0.800	NA	NA	NA	NA	NA	-	Paint Branch	
Lustine Chevrolet Co. (Hyattsville, Md.)	NA	Hy-Car.	E-7	Unk	NA	NA	NA	NA	NA	-	Tr. Northeast Br.	Oil
PEPCO Benning Gen. Sta. (Washington, D.C.)	NA	Cool.	H-1	154.500	NA	NA	NA	NA	NA	-	Anacostia River	
Potomac Sand & Gravel Co. (Washington, D.C.)	NA	Miner.	I-2	Unk	NA	NA	NA	NA	NA	-	Anacostia River	
PEPCO Buzzard Pt. Gen. Sta. (Washington, D.C.)	NA	Cool.	H-2	109.200	NA	NA	NA	NA	NA	-	Anacostia River	
Arlington Co.	186,000	San.	A-2	18.200	36,000	3,600	90	5,300	3,400	-	Fourmile Run	

Table V - 15(cont.)

Upper Estuary of Potomac River Basin (cont.)

Name	Pop. Served	Wastewater Class	Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal of BOD (%)	Effluent T. PO_4 (#/day)	Effluent TKN (#/day)	Effluent Other (#/day)	Receiving Stream	Remarks
Naval Res. Lab. (Alexandria, Va.)	NA	Cool.	H-1	0.180	NA	NA	NA	NA	NA	-	Potomac Estuary	
		Rad.	J	0.007	NA	NA	NA	NA	NA	-	Potomac Estuary	
District of Columbia	1,750,000	San.	A-1	237.000	335,400	77,200	77	45,000	40,000	-	Potomac Estuary	
PEPCO Generating Sta. (Alexandria, Va.)	NA	Cool.	H-1	315.600	NA	NA	NA	NA	NA	-	Potomac Estuary	
Washington Sand & Gravel Co. (Hillside, Md.)	NA	Miner.	I-2	0.600	NA	NA	NA	NA	NA	-	Oxon Run	
Va. Sand & Gravel Co. (Springfield, Va.)	NA	Miner.	I-2	1.000	NA	NA	NA	NA	NA	-	Back Lick Run	
Alexandria, Va.	180,000	San.	A-1	21.400	38,600	9,400	76	7,000	4,460	-	Cameron Run	
Fairfax Co. Westgate	127,000	San.	A-1	11.900	25,100	12,600	50	3,920	2,180	-	Cameron Run	
Buffalo Sand & Gravel (Camp Springs, Md.)	NA	Miner.	I-2	0.800	NA	NA	NA	NA	NA	-	Henson Creek	
District Sand & Gravel (Camp Springs, Md.)	NA	Miner.	I-2	0.750	NA	NA	NA	NA	NA	-	Meetinghouse Branch	
Andrews AFB, #1	7,000	San.	A-1	0.732	1,400	210	85	180	100	-	Paynes Branch-Meetinghouse Branch	
Inland Materials, Inc. (Clinton, Md.)	NA	Miner.	I-2	Unk	NA	NA	NA	NA	NA	-	Paynes Branch	
Andrews AFB, #4	NA	San.	A-1	0.071	118	13	89	17	10	-	Paynes Branch	
Country Club Cleaners (Clinton, Md.)	NA	I-Biol.	B-10	Unk	Unk	Unk	85	Unk	Unk	-	Paynes Branch	Laundry
Piscataway, Md. (WSSC)	60,000	San.	A-1	5.000	6,700	540	91	920	600	-	Piscataway Bay	Also AWTr.

Table V - 15(cont.)

Name	Pop. Served	Wastewater Class	Wastewater Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal of BOD (%)	Effluent T. PO_4 (#/day)	Effluent TKN (#/day)	Effluent Other (#/day)	Receiving Stream	Remarks
Fort Washington Estates	1,000	San.	A-1	0.100	170	9	95	25	14	-	Piscataway Creek	Abandoned 1967
Fairfax Co. - Little Hunting Creek	28,600	San.	A-1	2.850	5,125	1,000	80	870	550	-	Little Hunting Creek	
Fairfax Co. - Dogue Creek	16,000	San.	A-1	1.830	2,860	540	81	600	350	-	Dogue Creek	
Ft. Belvoir - Post #2	14,500	San.	A-1	1.450	2,400	240	90	330	280	-	Dogue Creek	
Ft. Belvoir - #1 STP	3,700	San.	A-1	0.310	510	60	88	100	59	-	Gunston Cove	
Fairfax - City - SD	13,600	San.	A-1	1.400	2,330	350	85	344	200	-	Accotink Creek	
Vienna, Va. - Southside	5,460	San.	A-1	0.550*	NA	NA	NA	NA	NA	-	To D.C. System	
Pohick Estates, Va.	200	San.	A-1	0.020	33	5	85	5	3	-	Pohick Creek	
North Indian Head Estates, Md.	170	San.	A-1	0.010	17	8	50	2	1	-	Pomonkey Creek (Md.)	
Potomac Heights, Md.	2,700	San.	A-1	0.200	330	200	40	49	28	-	Potomac Estuary	
Indian Head, Md.	1,200	San.	A-1	0.100	160	150	7	25	14	-	Potomac Estuary	

Table V - 16

MUNICIPAL AND INDUSTRIAL WASTEWATER INVENTORY

Occoquan Creek Basin

Name	Pop. Served	Wastewater Class	Wastewater Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal of BOD (%)	Effluent T. PO_4 (#/day)	Effluent TKN (#/day)	Effluent Other (#/day)	Receiving Stream	Remarks
Camp Goettge (Fauquier Co., Va.)	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Darrels Run	
Nakesville School (Prince William, Co., Va.)	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Slate Run	
Camp Upshur (USMC)		San.	A-1	0.090	150	19	87	22	13	-	Cedar Run	
		Miner.	H-1	0.012	NA	NA	NA	NA	NA	-	" "	
Lee Hi Motel (Fauquier Co., Va.)	NA	San.	A-1	0.030	50	7	85	7	4	-	Broad Run	
Vint Hill Farms Station (Fauquier Co., Va.)	NA	San.	A-2	Unk	Unk	Unk	Unk	Unk	Unk	-	Broad Run	Upstream plant
Vint Hill Farms Station (Fauquier Co., Va.)	NA	San.	A-2	Unk	Unk	Unk	Unk	Unk	Unk	-	Broad Run	
Stuckey Service Station (Fauquier Co., Va.)	NA	San.	A-2	Unk	Unk	Unk	Unk	Unk	Unk	-	Broad Run	
Partridge School (Prince William Co., Va.)	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Broad Run	
Antioch - McCrea E.S. (Prince William Co., Va.)	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	North Run	
Gardner's Trailer Park (Prince William Co.,Va.)	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	North Run	
Lakeview Estates Gainsville, Va. (Prince William Co.,Va.)	2,000	San.	A-1	0.020	33	5	85	5	3	-	Broad Run	
Linton Hill School (Briston, Va.)	400	San.	A-1	0.070	117	76	35	17	10	-	Broad Run	
Manassas Airport (Prince William Co.)	NA	San.	A-2	Unk	Unk	Unk	Unk	Unk	Unk	-	Broad Run	

Table V - 16 (cont.)

Occoquan Creek Basin (cont.)

Name	Pop. Served	Wastewater Class	Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal of BOD (%)	Effluent T. PO_4 (#/day)	Effluent TKN (#/day)	Effluent Other (#/day)	Receiving Stream	Remarks
Woodbridge Clay Products (Manassas, Va.)	NA	San.	A-2	0.150	Unk	Unk	Unk	Unk	Unk	-	Broad Run	
Jeannie Dean High School (Prince William Co.)	NA	San.	A-1	Unk	Unk	Unk	85	Unk	Unk	-	Broad Run	
Thornton (Prince William Co.)	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Occoquan Creek	
Manassas Reg. High School (Manassas, Va.)	900	San.	A-1	0.010	17	2	85	2	1	-	Bull Run	
Manassas #1 Manassas #2	6,600	San.	A-1	0.400	666	100	85	100	57	-	Bull Run	New system
Manassas Park #1 (Manassas, Va.)	6,800	San.	A-1	0.600	1,000	150	85	150	85	-	Bull Run	
Manassas District Home (Manassas, Va.)	Unk	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Bull Run	
Deer Park I.J. Breeder (Prince William Co.)	Unk	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Bull Run	
Barrett's Sunnybrook Estates (Prince William Co.)	Unk	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Bull Run	
Navy E. S. (Prince William Co.)	Unk	San.	A-2	Unk	Unk	Unk	Unk	Unk	Unk	-	Club Run	
Fairfax County, Va.							90			-		
Middle Cub	1,000	San.	A-1	0.098	88	8		24	14	-	Middle Cub Run	
Upper Cub	NA	San.	A-1	Unk	Unk	Unk	85	Unk	Unk	-	Upper Cub Run	
Big Rocky	NA	San.	A-1	Unk	Unk	Unk	85	Unk	Unk	-	Big Rocky Run	
Flatlick	3,000	San.	A-1	0.333	423	100	81	82	47	-	Flatlick Run	
Westside Subdivision (Fairfax County, Va.)	Unk	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Little Rock Run	
Convict Camp #30 (Fairfax County, Va.)	200	San.	A-1	0.020	33	5	85	5	3	-	Little Rock Run	

Table V - 16 (cont.)

Name	Pop. Served	Wastewater Class	Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal of BOD (%)	Effluent T. PO_4 (#/day)	Effluent TKN (#/day)	Effluent Other (#/day)	Receiving Stream	Remarks
Greater Manassas S.D. (Lock Lamand S.A.)	7,500	San.	A-1	0.700	1,170	175	85	172	100	-	Bull Run	
Yorkshire School (Fairfax County, Va.)	NA	San.	A-1	0.002	3	1	85	1	0	-	Bull Run	
Robert W. Ambrose (Fairfax County, Va.)	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Pine Creek	Trailer park
Occoquan, Va. (Occoquan - Woodbridge)	4,600	San.	A-1	0.100	167	33	80	25	14	-	Occoquan Creek	
Lorton Nike Site (Lorton, Va.)	NA	San.	A-1	0.010	17	2	85	2	1	-	Giles Run	
Lorton Reformity (D.C. Penal Inst.)	NA	San.	A-1	0.410	683	307	55	100	58	-	Giles Run	
Marumsco (Occoquan - Woodbridge)	1,000	San.	A-1	1.000	1,600	240	85	246	142	-	Marumsco Creek	
Vulcan Materials (Grahan, Va.)	NA	Miner.	I-2	362.000	NA	NA	NA	NA	NA	-	Occoquan Bay	

Table V - 17

MUNICIPAL AND INDUSTRIAL WASTEWATER INVENTORY

Middle Estuary of Potomac River Basin

Name	Pop. Served	Wastewater Class	Wastewater Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal of BOD (%)	Effluent T. PO_4 (#/day)	Effluent TKN (#/day)	Effluent Other (#/day)	Receiving Stream	Remarks
Naval Propellant Plant (Indian Head, Md.)	NA	San.	A-1	0.020	33	5	85	5	3	-	Potomac Estuary	Septic tanks
		San.	A-1	0.310	516	114	78	76	44	-	Potomac Estuary	
M.G. Garger Trailer Park (Prince William Co.)	240	San.	A-1	0.020	33	5	85	5	3	-	Neabsco Creek	
Garfield High School (Prince William Co.)	NA	San.	A-1	0.020	33	5	85	5	3	-	Neabsco Creek	
Neabsco, Va.	2,500	San.	A-1	0.250	Unk	Unk	85	74	42	-	Neabsco Creek	
Freestone Pt., Va.	50	San.	A-1	0.005	8	1	85	1	1	-	Powells Creek	
Featherstone, Va.	2,000	San.	A-1	0.300	500	75	85	Unk	Unk	-	Farm Creek	
Waldorf Nike Site (USAR) (Waldorf, Md.)	NA	San.	A-1	Unk	Unk	Unk	Unk	Unk	Unk	-	Mattawoman Creek	
Naval Res. Lab. (USN)	NA	San.	A-1	0.001	2	1	85	1	1	-	Mattawoman Creek	
Crazy Laundromat (Maryland)	NA	I-Biol.	B-9	Unk	Unk	Unk	Unk	Unk	Unk	-	Tr. at Mattawoman Creek	
Naval Propellant Plant (Indian Head, Md.)	NA	San.	A-1	0.160	267	267	0	52	29	-	Mattawoman Creek	Plant to treat
VEPCO Possum Pt. Gen. Sta.	NA	Cool.	H-1	400.000	NA	NA	NA	NA	NA	-	Potomac Estuary	
Washington Reid School	NA	San.	A-1	Unk	Unk	Unk	85	Unk	Unk	-	Tr. Quantico Creek	
Dumfries - Triangle, Va.	6,000	San.	A-1	0.140	Unk	210	50	Unk	Unk	-	Little Creek	
Dumfries School (Virginia)	NA	San.	A-1	0.005	8	1	85	2	1	-	Little Creek	
Melrose Gardens	1,200	San.	A-1	0.120	200	30	85	30	17	-	Tr. Little Creek	
Post Docks (Marine Corps Schools Quantico, Va.)	NA	San.	A-1	0.001	3	3	0	1	1	-	Quantico Creek	

Table V - 17 (cont.)

Middle Estuary of Potomac River Basin (cont.)

Name	Pop. Served	Wastewater Class	Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal of BOD (%)	T. PO_4 (#/day)	Effluent TKN (#/day)	Other (#/day)	Receiving Stream	Remarks
Main S.T.P. (M.C.S.Q.)	NA	San.	A-1	1.390	4,600	460	90	340	200	-	Quantico Creek	
Vehicle Wash Racks (M.C.S.Q.)	NA	Hy-Car.	E-7	0.010	NA	NA	NA	NA	NA	-	Quantico Creek	
Water Treatment Plant (USMC)	NA	Miner.	I-2	0.090	NA	NA	NA	NA	NA	-	Chopawamsic Creek	Wastewater
Brown Field (USMC Air Station)	NA	San.	A-1	0.860	1,430	460	68	210	120	-	Chopawamsic Creek	
Midway Island Housing (USMC)	NA	San.	A-1	0.620	1,000	83	92	150	90	-	Tank Creek	
Rifle Range (USMC)	NA	San.	A-1	0.060	100	18	82	15	8	-	Beaver Dam Run	
Camp Barrett (USMC)	NA	San. Miner.	A-1 I-2	0.160 0.008	NA	NA	89	NA	NA	-	Aquia Creek	Wastewater
Aquia Mobile Park (Garrisonville, Va.)	100	San.	A-1	0.010	17	2	85	3	2	-	Aquia Creek	Lagoon
S. Stafford Co. San. Dist. (Stafford Co., Va.)	NA	San.	A-1	.000	0	0	0	0	0	-	Aquia Creek	Being built
Stafford High School (Stafford Co., Va.)	NA	San.	A-1	Unk	Unk	Unk	85	Unk	Unk	-	Claiborn Creek	
Garrison Estates (Stafford Co., Va.)	NA	San.	A-1	.000	0	0	0	0	0	-	Aquia Creek	Being built
State Camp #21 (Stafford Co., Va.)	Unk	San.	A-1	.010	17	2	85	3	2	-	Potomac Estuary	

Table V - 18

MUNICIPAL AND INDUSTRIAL WASTEWATER INVENTORY

Lower Estuary of Potomac River Basin

Name	Pop. Served	Wastewater Class	Index	Flow (mgd)	Infl't. BOD (#/day)	Eff't. BOD (#/day)	Removal of BOD (%)	Effluent T. PO4 (#/day)	TKN (#/day)	Other (#/day)	Receiving Stream	Remarks
LaPlata, Md.	1,400	San.	A-1	0.280	420	130	78	70	40	-	Port Tobacco Creek	
Naval Weapons Lab. (USN Dahlgren, Va.)	NA	San.	A-1	0.350	580	87	85	88	50	-	Upper Machodoc Creek	
Colonial Branch, Va.	2,500	San.	A-1	0.250	420	270	35	61	35	-	Monroe Bay	
Waldorf Laundry (Waldorf, Md.)	NA	I-Biol.	B-9	0.007	60	42	35	2	1	-	Zekiah Swamp	
East Coast Radio (Receiving Sta. (USAR)	NA	San.	A-1	0.010	17	2	85	3	2	-	Zekiah Swamp	
So. Md. Correctional Camp. (Md.)	130	San.	A-1	0.010	17	2	85	3	2		Gilbert Swamp Run	
Cople - Montros Elem. Sch. (Virginia)	NA	San.	A-1	0.005	8	1	85	2	1	-	Nomini Creek	
Scoville Mfg. Co. (Virginia)	NA	San.	A-1	Unk	Unk	Unk	88	Unk	Unk		Nomini Creek	
Leonardtown. Md.	670	San.	A-1	0.080	133	8	35	20	11	-	Town Run	
L.P. Stewart (Piney Pt.,Md.)	NA	Miner.	I-2	Unk	NA	NA	NA	NA	NA	-	Piney Pt. Creek	
Marina & Residences (Piney Pt., Md.)	250	San.	A-1	0.020	33	22	35	5	3	-	Piney Pt. Creek	Seasonal
Piney Pt. Hotel (Piney Pt., Md.)	250	San.	A-1	0.020	33	22	35	5	3	-	Piney Pt. Creek	Seasonal
Calluo Elem. Sch. (Virginia)	NA	San.	A-1	0.005	8	1	85	2	1	-	Lodge Creek	
St. Mary's Jr. College (Maryland)	450	San.	A-1	0.040	67	43	35	10	6	-	St. Mary's River	
Nav. Air Navigation & Electronics Proj.)	35	San.	A-1	0.001	2	1	85	1	1	-	St. Mary's River	

Table V - 18(cont.)

Lower Estuary of Potomac River Basin (cont.)

Name	Pop. Served	Wastewater		Flow	Infl't. BOD	Eff't. BOD	Removal of BOD	Effluent T. PO_4	Effluent TKN	Effluent Other	Receiving Stream	Remarks
		Class	Index	(mgd)	(#/day)	(#/day)	(%)	(#/day)	(#/day)	(#/day)		
G.I. Rupert Lore Seafood Co. (Ridge, Md.)	NA	Food	C-8	Unk	Unk	Unk	Unk	Unk	Unk	-	Smith Creek	Shellfish
S.S. Headley Oyster Packer (Lake, Va.)	NA	Food	C-8	Unk	Unk	Unk	Unk	Unk	Unk	-	Coan River	Shellfish
Keyser Bros. (Lake, Va.)	NA	Food	C-8	Unk	Unk	Unk	Unk	Unk	Unk	-	Coan River	Crabs